

FIG. 1

Warning: Expression "x.f" on line 63 may cause null dereference 202

Suggestion: Perhaps declare "x" as "non_null" 204

Warning: Expression "x.f" on line 112 may cause null dereference 206

Suggestion: Perhaps declare "x" as "non_null" 208

Warning: Expression "x.g" on line 218 may cause null dereference 210

Suggestion: Perhaps declare "x" as "non_null" 212

FIG. 2

Suggestion: Perhaps declare "x" as "non_null" 302

* Warning: Expression "x.f" on line 63 may cause null dereference 202

* Warning: Expression "x.f" on line 112 may cause null dereference 206

* Warning: Expression "x.g" on line 218 may cause null dereference 210

FIG. 3

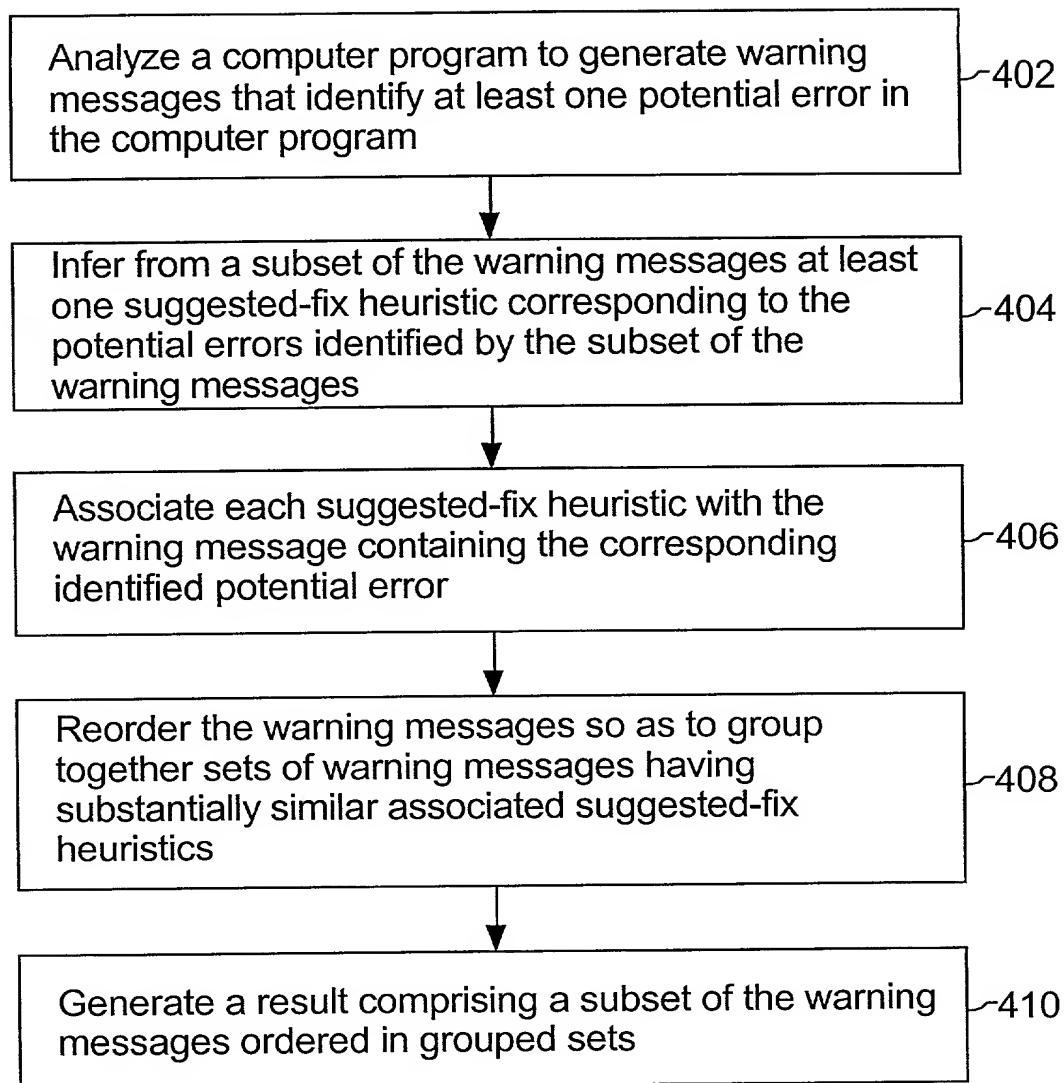


FIG. 4

502

Super-group (or sub-group) together at least one superset (or subset) of a plurality (or at least one) of the grouped sets of warning messages, each superset (or subset) identifying potential errors with respect to a particular aspect of the computer program

“Particular aspects” = one or more variables, objects, object references, locations in the computer program, or conditions

504

FIG. 5

Errors affecting variable "a"

Suggestion: Perhaps declare "a" as "non_null"

602

* Warning: Expression "a[i]" on line 27 may cause null dereference

604

* Warning: Expression "a[i]" on line 93 may cause null dereference

606

Suggestion: Perhaps declare the invariant "i < a.length"

608

* Warning: Expression "a[i]" on line 121 - array index possibly too large

610

Errors affecting variable "b"

Suggestion: Perhaps declare "b" as "non_null"

620

* Warning: Expression "b[n]" on line 17 may cause null dereference

622

Suggestion: Perhaps declare the invariant "n < b.length"

624

* Warning: Expression "b[n]" on line 155 - array index possibly too large

626

* Warning: Expression "b[n]" on line 173 - array index possibly too large

628

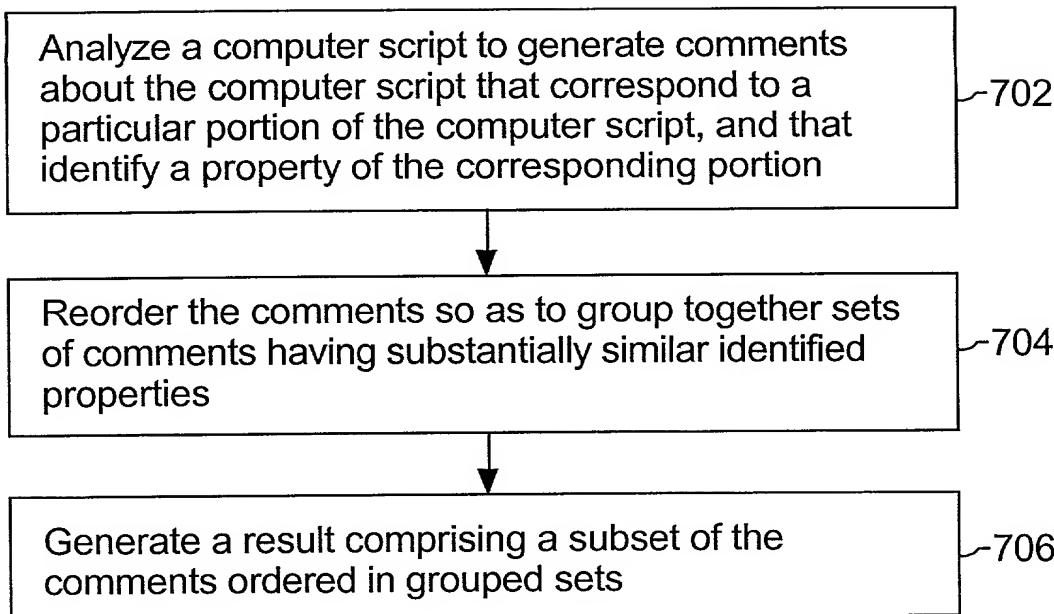


FIG. 7

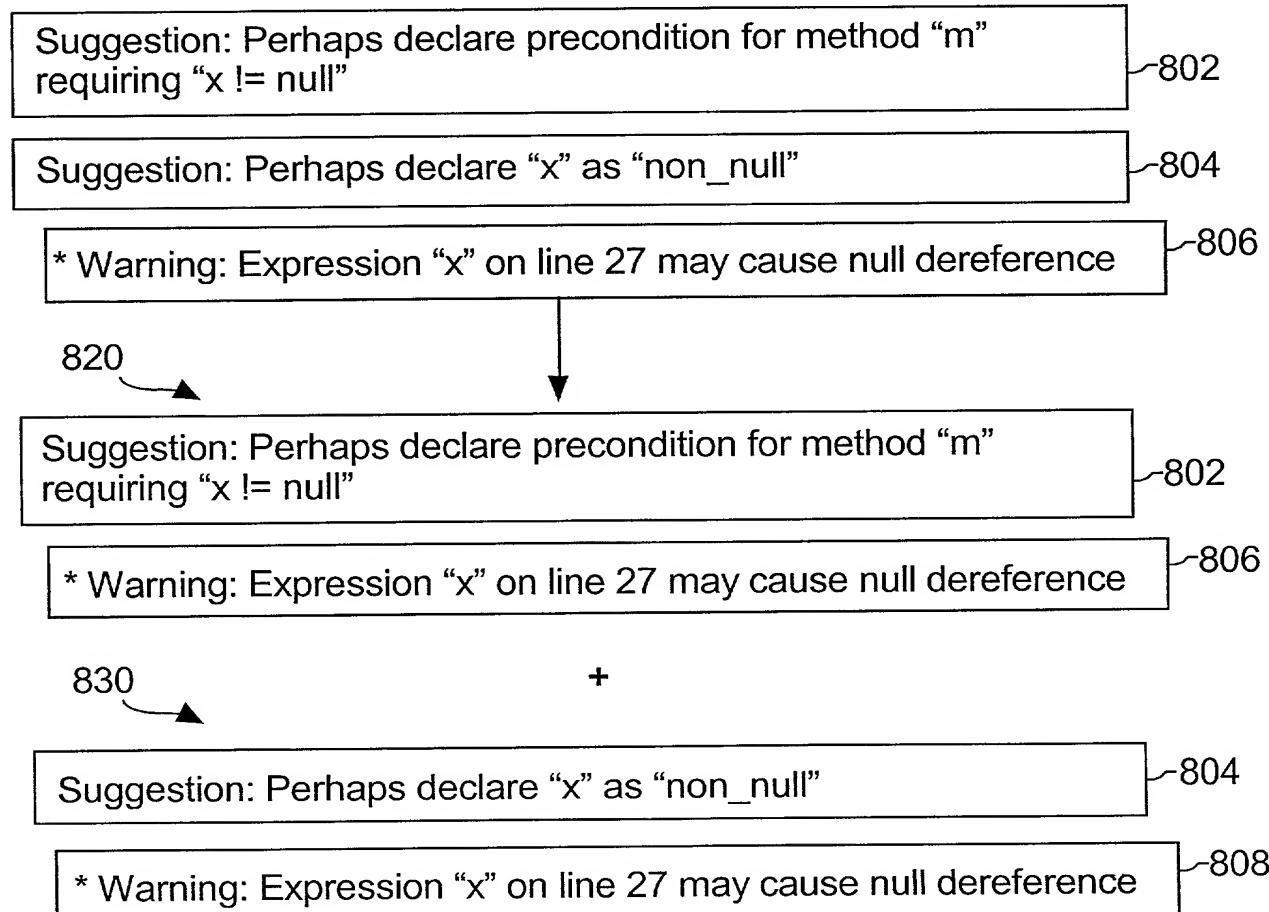
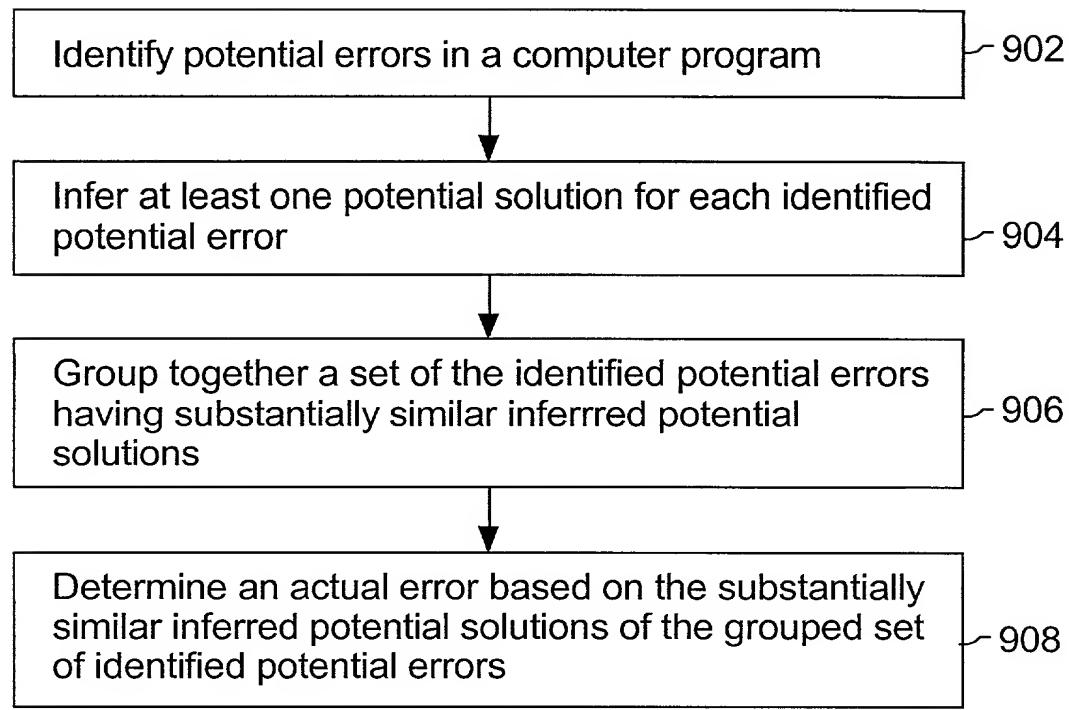


FIG. 8

**FIG. 9**